DETAILED ACTION

Priority

1. Acknowledgment is made of Applicant's claim for foreign priority based on an application filed in Japan on August 19, 2003. It is noted, however, that Applicant has not filed a certified copy of the foreign application JP 2003-207926 as required by 35 U.S.C. 119(b).

Election/Restrictions

2. Claims 4-6 have been withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on March 5, 2008.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Görl *et al.* (U.S. 6,433,064) in view of Beppu *et al.* (U.S. 4,551,240).

Görl *et al.* discloses finely divided, pulverulent rubber containing silica filler formed by co-coagulation of aqueous suspension of silica and rubber latex (col. 4, line 50-col. 5, line 15; examples III and IV). Görl *et al.* states that the particle size of rubber particles is in the range between 0.5 to 2 mm (500 to 2000 μm), and rubber powders according to the invention exhibit narrow particle size distribution shifted to smaller particle sizes (col. 2, lines 33-43), however the inventors do not quantify the distribution of particle sizes.

The prior art of Beppu *et al.* discloses an apparatus for air classifying particulate material. Flow velocity is optimized in order to separate particles such that 97 wt % of particles lie within 50 % of the target average particle size and 98 % of particles lie within 70 % of the target average particle size (col. A, table, col. 6).

Görl *et al.* intends to obtain narrow particle size distribution of product particles, and one having ordinary skill in the art would have found it obvious to classify particles in order to obtain a uniform distribution of particles. Since rubber powders are used to prepare useful rubber products, as shown in examples A-C, one having ordinary skill in the art would be motivated to use a uniform distribution of particles in order to obtain uniformly dispersed silica in the rubber product. One having ordinary skill in the art also would have found it obvious to use a uniform distribution of particles to minimize shear in compounding. Thus, it would have been obvious to one having ordinary skill in the art to use the apparatus of Beppu *et al.* in order to classify rubber particles of Görl *et al.* in order to achieve rubber particles having uniform particle distribution, and obtaining the appropriate distribution of particles is a matter of routine experimentation and would have been well within the skill level of, and thus obvious to, one of ordinary skill in the art.

Görl *et al.* is silent with respect to the morphology of rubber particles, however, in light of the fact that the particles of the prior art are prepared by the same co-coagulation process, a reasonable basis exists to believe that rubber particles of the prior art are approximately spherical, as recited in the instant claim 2.

Görl *et al.* teaches that rubber particles may contain further additives such as vulcanization accelerators and crosslinking agent (col. 7, lines 24-40). Rubber particles are further vulcanized as shown in examples A-C, and it would have been obvious to one having ordinary skill in the art to vulcanize rubber in order to obtain a rubber product having good mechanical properties.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rip A. Lee whose telephone number is (571)272-1104. The examiner can be reached on Monday through Friday from 9:00 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu S. Jagannathan, can be reached at (571)272-1119. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on the access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll free).

/Rip A. Lee/
Art Unit 1796

June 11, 2008